BRUHAT BENGALURU MAHANAGARA PALIKE

MEASUREMENT SHEET

RA 2ND AND FINAL BILL

Name of work: Improvements to Roads and Drains at Simhadri Layout, Sai Garden Layout and Surrounding in Ward No.11, (Kuvempunagara).

Estimated Cost : Rs. 100.00 Lakhs

Job Code: 011-22-000004 Indent No. 49272

Head of Account : P-3075 Special Comprehensive Development Works

Name of Agency: M/s. Sathya Constructions Prop: R. Satheesh, No. 600, Down Bazaar Road, Yelahanka, Bangalore - 64.

Work order No: EE/BTP/BBMP/E-PMT/11(49272)/WO/59/2021-22 D: 18-03-2022.

Measurements Recarded on : 15-05-2023

Sl No	Description of work	Mesurement						Qty	Rate	Amount
		No.	L	B1	B2	Av.,B	D			
1	Earthwork excavation by manual means for roads, drains & similar works in ordinary soil excavated surface levelled and sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete as per specifications.									
	Previous Qty Vide 1st and Part Bill is							**547.62**		
	Present Qty							**-NIL-**		
2	**Removing and refixing** stone slabs of drains and pointing in CM (1:3)									
	Previous Qty Vide 1st and Part Bill is							**297.00**		
	Present Qty							**-NIL-**		
3	Providing granite slabs of selected quality roughly dressed having a size of 7.5cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete.									
	Previous Qty Vide 1st and Part Bill is							**74.25**		
	Present Qty							**-NIL-**		
4	Providing and laying in position plain cement concrete of mix 1:4:8 with OPC cement @ 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.85cum and fine aggregates @ 0.57cum machine mixed, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, including cost of all materials, labour, HOM of machinery, curing complete as per specifications.									
	Previous Qty Vide 1st and Part Bill is							**81.90**		
	Present Qty							**-NIL-**		
5	Providing laying plain/ reinforced cement concrete for side Drains Using M20 nominal mix Concrete with OPC at 300kgs.With 20mm and Down size granite metal coarse aggregate at 0.69cum and fine aggregate at 0.43cum Machne mixed, well compacted for wall and Bottom including centering shuttering,cost of materials,HOM of Machinery,Curing Etc.,Complete Excluding cost of Steel as per morth MORTH specification No. 1500, 1700, 2200. Including Cost of material, Labour, HOM complete as per Specification-WALL & Bottom thickness 15Cm									
	Previous Qty Vide 1st and Part Bill is							**168.47**		
	Present Qty							**-NIL-**		
6	Providing T.M.T bars Fe 500 steel reinforcement for R.C.C work including straightening, cutting, bending, hooking, placing in position, lapping and / or welding wherever required, tying with binding wire and anchoring to the adjoining members wherever necessary complete as per design (laps, hooks and wastage shall not be measured and paid) cost of materials, labour, HOM of machinery complete as per specifications.									
	Previous Qty Vide 1st and Part Bill is							**10.21**		

Sl No	Description of work	Mesurement						Qty	Rate	Amount
		No.	L	B1	B2	Av.,B	D			
7	Providing and Fixing pre cast covering Slab made out of CC 1:2:4 with 10 cm thick and Finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., copmplete.									
	Previous Qty Vide 1st and Part Bill is							**423.00**		
	Present Qty							**-NIL-**		
8	Providing and Fixing pre cast covering Slab 250mm thick made out of CC 1:2:4 and jelly 20mm Down size with steel reinforcement including form work,curing,including cost of alll materials, labour,hire charges of machinery, loading, unloading, lead and lift,transportation etc ,complete									
	Previous Qty Vide 1st and Part Bill is							**7.68**		
	Present Qty							**-NIL-**		
9	Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications									
	Previous Qty Vide 1st and Part Bill is							**307.80**		
	Present Qty							**-NIL-**		
10	Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications.									
	Previous Qty Vide 1st and Part Bill is							**2827.55**		
	Present Qty							**-NIL-**		
11	**Compaction of original ground** by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications.									
	Previous Qty Vide 1st and Part Bill is							**3637.55**		
	Present Qty							**-NIL-**		
12	Construction of granular sub-base Grading-V as Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98 % proctor density, complete as per specifications									
	Previous Qty Vide 1st and Part Bill is							**121.50**		
	Present Qty							**-NIL-**		
13	Providing, laying, spreading and compacting cushed stone aggregates of granite / trap / basalt to **wet mix macadam** specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications									
	Previous Qty Vide 1st and Part Bill is							**522.56**		
	Reserved Previous Qty Vide 1st and Part Bill is							**127.48**		
	Present Qty Vide Pre-premeasurement Recorded vide E-Bill Page No. 01 to 02 is =							**458.64**		
	Total Qty =							**1108.68**		
	Deduct Previous paid Qty =							**395.08**		
	Present Qty to be Paid is =							**586.12**	2101.14	**1231521.00**
14	Providing and applying **primer coat** with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications									

Sl No	Description of work	Mesurement No.	L	B1	B2	Av.,B	D	Qty	Rate	Amount
	Present Qty Vide Pre-premeasurement Recorded vide E-Bill Page No. 03 is =							1600.07		
	Total Qty =							3118.51		
	Deduct Previous Qty =							-1518.44		
	Present Qty to be Paid is =							1600.07	35.61	56979.00
15	KSRRB 500-11. Providing and laying bituminous macadam on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by smooth wheeled, vibratory & tandem rollers to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH /Chapter 5 - using 40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.4 % VG-30 Bitumen									
	Previous Qty Vide 1st and Part Bill is							75.92		
	Present Qty Vide Pre-premeasurement Recorded vide E-Bill Page No. 04 is =							80.00		
	Total Qty =							155.92		
	Deduct Previous Qty =							-75.92		
	Present Qty to be Paid is =							80.00	7104.72	568378.00
16	Providing and **applying tack coat** using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM complete as per specifications									
	Previous Qty Vide 1st and Part Bill is							1518.44		
	Present Qty Vide Pre-premeasurement Recorded vide E-Bill Page No. 05 is =							1600.07		
	Total Qty =							3118.51		
	Deduct Previous Qty =							-1518.44		
	Present Qty to be Paid is =							1600.07	13.35	21361.00
17	Providing and laying **bituminous concrete** using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction in all respects complete as per specifications Clause 507 of MORTH V revision using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-ll (30 mm to 45 mm) with 5.4% VG-30 Bitumen									
	Previous Qty Vide 1st and Part Bill is							60.74		
	New Sai Garden									
	Main Road	1	15.00	9.50	8.30	8.90	0.04	5.34		
		1	15.00	8.30	8.30	8.30	0.04	4.98		
		1	15.00	8.30	8.30	8.30	0.04	4.98		
		1	15.00	8.30	7.90	8.10	0.04	4.86		
		1	15.00	7.90	8.40	8.15	0.04	4.89		
		1	15.00	8.40	8.60	8.50	0.04	5.10		
		1	15.00	8.60	8.40	8.50	0.04	5.10		
		1	15.00	8.40	8.40	8.40	0.04	5.04		
		1	15.00	8.40	8.20	8.30	0.04	4.98		
		1	15.00	8.20	8.10	8.15	0.04	4.89		
		1	15.00	8.10	6.60	7.35	0.04	4.41		
		1	4.30	6.60	4.40	5.50	0.04	0.95		
	1st Cross									
		1	15.00	5.20	4.70	4.95	0.04	2.97		
		1	15.00	4.70	5.10	4.90	0.04	2.94		

Sl No	Description of work	Mesurement						Qty	Rate	Amount
		No.	L	B1	B2	Av.,B	D			
	Chambers	-2	1.00			0.70	0.04	-0.06		
	Man holes	-6	0.64	Area of Circle = (3.142*0.9*0.9)/4 = 0.64			0.04	-0.15		
				Total Qty =				**124.76**		
	Deduct Previous Qty =							**-60.74**		
	Present Qty to be Paid is =							**64.02**		
	Qty Limited to Appr Qty							**64.00**	10500.15	**672010.00**

Assistant Engineer
New Ward No. 15

Assistant Executive Engineer
Vidyaranyapura Sub Division

Assistant Executive Engineer
Vidyaranyapura Sub Division
B.B.M.P, Bangalore - 97

Sl No	Description of work	Mesurement No.	L	B1	B2	Av.,B	D	Qty	Rate	Amount
	Measurements Recarded on :	15-05-2023								
18	Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface/ Concrete Surface: Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 standards specified. The finished surface to be level, uniform and free from streaks and holes complete as per specifications									
	Simhadri Layout									
	1st Main 1st Cross	2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	4.60			0.10		0.92		
	1st Main 2nd Cross	2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	12.10			0.10		2.42		
	New Sai Garden									
	Main Road	2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	4.30			0.10		0.86		
	1st Cross									
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	13.50			0.10		2.70		
					Total Qty =			**96.90**	477.43	**46263.00**
								Sub Total		**2596512.00**
								Add GST @ 18%		**467372.00**
								Grand Total		**3063884.00**

Assistant Engineer
New Ward No. 15

Assistant Executive Engineer
Vidyaranyapura Sub Division